

AA

1/11

SEQUENCE LISTING

<110> Chen, Lieping

<120> B7-H1, A NOVEL IMMUNOREGULATORY MOLECULE

<130> 07039-220001

<140> US 09/649,108

<141> 2000-08-28

<150> US 09/451,291

<151> 1999-11-30

<160> 18

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 290

<212> PRT

<213> Homo sapiens

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Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu  
35 40 45  
Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile  
50 55 60  
Ile Gln Phe Val His Gly Glu Asp Leu Lys Val Gln His Ser Ser  
65 70 75 80  
Tyr Arg Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn  
85 90 95  
Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr  
100 105 110  
Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val  
115 120 125  
Lys Val Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val  
130 135 140  
Asp Pro Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr  
145 150 155 160  
Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser  
165 170 175  
Gly Lys Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn  
180 185 190  
Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Asn Glu Ile Phe Tyr  
195 200 205  
Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu  
210 215 220  
Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr His  
225 230 235 240  
Leu Val Ile Leu Gly Ala Ile Leu Leu Cys Leu Gly Val Ala Leu Thr  
245 250 255  
Phe Ile Phe Arg Leu Arg Lys Gly Arg Met Met Asp Val Lys Lys Cys  
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Gly Il Gln Asp Thr Asn Ser Lys Lys Gln Ser Asp Thr His Leu Glu  
275 280 285



Glu Thr  
290

<210> 2  
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<212> DNA  
<213> Homo sapiens

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aaattcccaag tagaaaaaca attagacctg gctgcactaa ttgtctattg ggaaatggag 180  
gataagaaca ttattcaatt ttgtcatgga gaggaagacc tgaaggttca gcatactgac 240  
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atcacagatg tgaaattgca gnatgcaggg gtgtaccgct gcatgatcag ctatggtggt 360  
gccgactaca agcgaattac tttgaaagt aatccccat acaacaaaat caaccaaaga 420  
atttggttt tggatccagt cacctctgaa catgaactga catgtcaggc tgagggctac 480  
cccaaggccg aagtcatctg gacaaggact gaccatcaag tcctgagttt taagaccacc 540  
accaccaatt ccaagagaga ggagaagctt ttcaatgtga ccagcacact gagaatcaac 600  
acaacaaacta atgagattt ctactgcact ttttaggat tagatctga ggaaaaccat 660  
acagctgaat tggcatccc agaactact ctggcacatc ctccaaatga aaggactcac 720  
tttgttaattc tgggagccat cttattatgc ctttgttag cactgacatt catttccgt 780  
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<212> PRT  
<213> Mus musculus

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Gly Ser Asn Val Thr Met Glu Cys Arg Phe Pro Val Glu Arg Glu Leu 35 40 45  
Asp Leu Leu Ala Leu Val Val Tyr Trp Glu Lys Glu Asp Glu Gln Val 50 55 60  
Ile Gln Phe Val Ala Gly Glu Asp Leu Lys Pro Gln His Ser Asn 65 70 75 80  
Phe Arg Gly Arg Ala Ser Leu Pro Lys Asp Gln Leu Leu Lys Gly Asn 85 90 95  
Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr 100 105 110  
Cys Cys Ile Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Leu 115 120 125  
Lys Val Asn Ala Pro Tyr Arg Lys Ile Asn Gln Arg Ile Ser Val Asp 130 135 140  
Pro Ala Thr Ser Glu His Glu Leu Ile Cys Gln Ala Glu Gly Tyr Pro 145 150 155 160  
Glu Ala Glu Val Ile Trp Thr Asn Ser Asp His Gln Pro Val Ser Gly 165 170 175  
Lys Arg Ser Val Thr Thr Ser Arg Thr Glu Gly Met Leu Leu Asn Val 180 185 190  
Thr Ser Ser Leu Arg Val Asn Ala Thr Ala Asn Asp Val Phe Tyr Cys 195 200 205  
Thr Phe Trp Arg Ser Gln Pro Gly Gln Asn His Thr Ala Glu Leu Ile 210 215 220  
Ile Pro Glu Leu Pro Ala Thr His Pro Pro Gln Asn Arg Thr His Trp 225 230 235 240

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<212> DNA  
<213> *Mus musculus*

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<222> (1)...(870)

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1           5           10          15

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cg<sup>g</sup> gc<sup>g</sup> tt<sup>t</sup> ac<sup>t</sup> at<sup>c</sup> ac<sup>g</sup> gct<sup>c</sup> cc<sup>a</sup> aag<sup>g</sup> gac<sup>t</sup> tt<sup>g</sup> tac<sup>t</sup> gt<sup>g</sup> gt<sup>g</sup> gag<sup>t</sup> tat<sup>a</sup>  
 Arg<sup>20</sup> Ala<sup>25</sup> Phe<sup>30</sup> Thr<sup>35</sup> Ile<sup>40</sup> Thr<sup>45</sup> Ala<sup>50</sup> Pro<sup>55</sup> Lys<sup>60</sup> Asp<sup>65</sup> Leu<sup>70</sup> Tyr<sup>75</sup> Val<sup>80</sup> Val<sup>85</sup> Glu<sup>90</sup> Tyr<sup>95</sup>

ggc agc aac gtc acg atg gag tgc aga ttc cct gta gaa cg<sup>g</sup> gag ctg 144  
 Gly Ser Asn Val Thr Met Glu Cys Arg Phe Pro Val Glu Arg Glu Leu  
 35 40 45

gac ctg ctt gcg tta gtg gtg tac tgg gaa aag gaa gat gag caa gtg	192	
Asp Leu Leu Ala Leu Val Val Tyr Trp Glu Lys Glu Asp Glu Gln Val		
50	55	60

att cag ttt gtg gca gga gag gag gac ctt aag cct cag cac agc aac 240  
Ile Gln Phe Val Ala Gly Glu Glu Asp Leu Lys Pro Gln His Ser Asn  
65 70 75 80

ttc agg ggg aga gcc tcg ctg cca aag gac cag ctt ttg aag gga aat 288  
Phe Arg Gly Arg Ala Ser Leu Pro Lys Asp Gln Leu Leu Lys Gly Asn  
85 90 95

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gct gcc ctt cag atc aca gac gtc aag ctg cag gac gca ggc gtt tac      336
Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr
          100          105          110

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tgc tgc ata atc agc tac ggt ggt gcg gac tac aag cga atc acg ctg 384  
 Cys Cys Ile Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Leu  
     115          120          125

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aaa gtc aat gcc cca tac cgc aaa atc aac cag aga att tcc gtg gat 432
Lys Val Asn Ala Pro Tyr Arg Lys Ile Asn Gln Arg Ile Ser Val Asp
    130           135           140

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cca gcc act tct gag cat gaa cta ata tgt cag gcc gag ggt tat cca 480  
 Pro Ala Thr Ser Glu His Glu Leu Ile Cys Gln Ala Glu Gly Tyr Pro  
 145 150 155 160

gaa gct gag gta atc tgg aca aac agt gac cac caa ccc gtg agt ggg      528  
 Glu Ala Glu Val Ile Trp Thr Asn Ser Asp His Gln Pro Val Ser Gly  
                   165              170              175

aag aga agt gtc acc act tcc cgg aca gag ggg atg ctt ctc aat gtg Lys Arg Ser Val Thr Thr Ser Arg Thr Glu Gly Met Leu Leu Asn Val 180 185 190	576
acc agc agt ctg agg gtc aac gcc aca gcg aat gat gtt ttc tac tgt Thr Ser Ser Leu Arg Val Asn Ala Thr Ala Asn Asp Val Phe Tyr Cys 195 200 205	624
acg ttt tgg aga tca cag cca ggg caa aac cac aca gcg gag ctg atc Thr Phe Trp Arg Ser Gln Pro Gly Gln Asn His Thr Ala Glu Leu Ile 210 215 220	672
atc cca gaa ctg cct gca aca cat cct cca cag aac agg act cac tgg Ile Pro Glu Leu Pro Ala Thr His Pro Pro Gln Asn Arg Thr His Trp 225 230 235 240	720
gtg ctt ctg gga tcc atc ctg ttg ttc ctc att gta gtg tcc acg gtc Val Leu Leu Gly Ser Ile Leu Leu Phe Leu Ile Val Val Ser Thr Val 245 250 255	768
ctc ctc ttc ttg aga aaa caa gtg aga atg cta gat gtg gag aaa tgt Leu Leu Phe Leu Arg Lys Gln Val Arg Met Leu Asp Val Glu Lys Cys 260 265 270	816
ggc gtt gaa gat aca agc tca aaa aac cga aat gat aca caa ttc gag Gly Val Glu Asp Thr Ser Ser Lys Asn Arg Asn Asp Thr Gln Phe Glu 275 280 285	864
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cat ttg ctg aac gca ttt act gtc acg gtt ccc aag gac cta tat gtg His Leu Leu Asn Ala Phe Thr Val Thr Val Pro Lys Asp Leu Tyr Val 15 20 25	159
gta gag tat ggt agc aat atg aca att gaa tgc aaa ttc cca gta gaa Val Glu Tyr Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu 30 35 40 45	207
aaa caa tta gac ctg gct gca cta att gtc tat tgg gaa atg gag gat Lys Gln Leu Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp 50 55 60	255

aag aac att att caa ttt gtg cat gga gag gaa gac ctg aag gtt cag Lys Asn Ile Ile Gln Phe Val His Gly Glu Glu Asp Leu Lys Val Gln 65 70 75	303
cat agt agc tac aga cag agg gcc cggtt aag gac cag ctc tcc His Ser Ser Tyr Arg Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser 80 85 90	351
ctg gga aat gct gca ctt cag atc aca gat gtg aaa ttg cag gat gca Leu Gly Asn Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala 95 100 105	399
ggg gtg tac cgc tgc atg atc agc tat ggt ggt gcc gac tac aag cga Gly Val Tyr Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg 110 115 120 125	447
att act gtg aaa gtc aat gcc cca tac aac aaa atc aac caa aga att Ile Thr Val Lys Val Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile 130 135 140	495
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gag ggc tac ccc aag gcc gaa gtc atc tgg aca agc agt gac cat caa Glu Gly Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln 160 165 170	591
gtc ctg agt ggt aag acc acc acc acc aat tcc aag aga gag gag aag Val Leu Ser Gly Lys Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys 175 180 185	639
ctt ttc aat gtg acc agc aca ctg aga atc aac aca aca act aat gag Leu Phe Asn Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Asn Glu 190 195 200 205	687
att ttc tac tgc act ttt agg aga tta gat cct gag gaa aac cat aca Ile Phe Tyr Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr 210 215 220	735
gct gaa ttg gtc atc cca gaa cta cct ctg gca cat cct cca aat gaa Ala Glu Leu Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu 225 230 235	783
agg act cac ttg gta att ctg gga gcc atc tta tta tgc ctt ggt gta Arg Thr His Leu Val Ile Leu Gly Ala Ile Leu Leu Cys Leu Gly Val 240 245 250	831
gca ctg aca ttc atc ttc cgt tta aga aaa ggg aga atg atg gat gtg Ala Leu Thr Phe Ile Phe Arg Leu Arg Lys Gly Arg Met Met Asp Val 255 260 265	879
aaa aaa tgt ggc atc caa gat aca aac tca aag aag caa agt gat aca Lys Lys Cys Gly Ile Gln Asp Thr Asn Ser Lys Lys Gln Ser Asp Thr 270 275 280 285	927
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tagtctactc	agtctattcc	taagtc	ctcc	tgggtttgg	tttgc	3442
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<210> 6  
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<212> PRT  
<213> Homo sapiens

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<212> PRT  
<213> Bovidae

<400> 7  
Lys Phe Glu Arg Gln  
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<210> 8  
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<212> PRT  
<213> Homo sapiens

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<212> PRT  
<213> Rattus rattus

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<212> PRT  
<213> Homo sapiens

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Lys Asn Ile Ile Gln Phe Val His Gly Glu Glu Asp Leu Lys Val Gln  
35 40 45  
His Ser Ser Tyr Arg Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser  
50 55 60  
Leu Gly Asn Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala  
65 70 75 80  
Gly Val Tyr Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg  
85 90 95  
Ile Thr Val Lys Val Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile  
100 105 110  
Leu Val Val Asp Pro Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala  
115 120 125  
Glu Gly Tyr Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln  
130 135 140  
Val Leu Ser Gly Lys Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys  
145 150 155 160  
Leu Phe Asn Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Asn Glu  
165 170 175  
Ile Phe Tyr Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr  
180 185 190  
Ala Glu Leu Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu  
195 200 205  
Arg Thr  
210

<210> 11  
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<212> PRT  
<213> Homo sapiens

<400> 11  
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 Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr  
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 Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile  
     50               55               60  
 Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu  
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 Lys Tyr Glu Lys Asp Ala Phe Lys Arg Glu His Leu Ala Glu Val Thr  
     85               90               95  
 Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Ser Asp Phe Glu  
     100              105              110  
 Ile Pro Thr Ser Asn Ile Arg Arg Ile Ile Cys Ser Thr Ser Gly Gly  
     115              120              125  
 Phe Pro Glu Pro His Leu Ser Trp Leu Glu Asn Gly Glu Glu Leu Asn  
     130              135              140  
 Ala Ile Asn Thr Thr Val Ser Gln Asp Pro Glu Thr Glu Leu Tyr Ala  
     145              150              155              160  
 Val Ser Ser Lys Leu Asp Phe Asn Met Thr Thr Asn His Ser Phe Met  
     165              170              175  
 Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp  
     180              185              190  
 Asn Thr Thr Lys Gln Glu His Phe Pro Asp Asn Leu Leu  
     195              200              205

&lt;210&gt; 12

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

Ala Tyr Phe Asn Glu Thr Ala Asp Leu Pro Cys Gln Phe Ala Asn Ser  
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 Gln Asn Gln Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln Glu  
     20              25              30  
 Asn Leu Val Leu Asn Glu Val Tyr Leu Gly Lys Glu Lys Phe Asp Ser  
     35              40              45  
 Val His Ser Lys Tyr Met Gly Arg Thr Ser Phe Asp Ser Asp Ser Trp  
     50              55              60  
 Thr Leu Arg Leu His Asn Leu Gln Ile Lys Asp Lys Gly Leu Tyr Gln  
     65              70              75              80  
 Cys Ile Ile His His Lys Lys Pro Thr Gly Met Ile Arg Ile His Gln  
     85              90              95  
 Met Asn Ser Glu Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile  
     100             105             110  
 Val Pro Ile Ser Asn Ile Thr Glu Asn Val Tyr Ile Asn Leu Thr Cys  
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 Ser Ser Ile His Gly Tyr Pro Glu Pro Lys Lys Met Ser Val Leu Leu  
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 Arg Thr Lys Asn Ser Thr Ile Glu Tyr Asp Gly Ile Met Gln Lys Ser  
     145             150             155             160  
 Gln Asp Asn Val Thr Glu Leu Tyr Asp Val Ser Ile Ser Leu Ser Val  
     165             170             175  
 Ser Phe Pro Asp Val Thr Ser Asn Met Thr Ile Phe Cys Ile Leu Glu  
     180             185             190  
 Thr Asp Lys Thr Arg Leu Leu Ser Ser Pro Phe Ser Ile Glu Leu Glu  
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 Asp Pro Gln Pro Pro Pro Asp His Ile Pro  
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&lt;210&gt; 13

&lt;211&gt; 306

<212> PRT  
<213> Mus musculus

&lt;400&gt; 13

Met	Ala	Cys	Asn	Cys	Gln	Leu	Met	Gln	Asp	Thr	Pro	Leu	Leu	Lys	Phe
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Pro	Cys	Pro	Arg	Leu	Ile	Leu	Leu	Phe	Val	Leu	Leu	Ile	Arg	Leu	Ser
				20				25					30		
Gln	Val	Ser	Ser	Asp	Val	Asp	Glu	Gln	Leu	Ser	Lys	Ser	Val	Lys	Asp
	35				40				45						
Lys	Val	Leu	Leu	Pro	Cys	Arg	Tyr	Asn	Ser	Pro	His	Glu	Asp	Glu	Ser
	50				55				60						
Glu	Asp	Arg	Ile	Tyr	Trp	Gln	Lys	His	Asp	Lys	Val	Val	Leu	Ser	Val
	65				70				75				80		
Ile	Ala	Gly	Lys	Leu	Lys	Val	Trp	Pro	Glu	Tyr	Lys	Asn	Arg	Thr	Leu
	85					90				95					
Tyr	Asp	Asn	Thr	Thr	Tyr	Ser	Leu	Ile	Ile	Leu	Gly	Leu	Val	Leu	Ser
	100					105				110					
Asp	Arg	Gly	Thr	Tyr	Ser	Cys	Val	Val	Gln	Lys	Lys	Glu	Arg	Gly	Thr
	115					120				125					
Tyr	Glu	Val	Lys	His	Leu	Ala	Leu	Val	Lys	Leu	Ser	Ile	Lys	Ala	Asp
	130					135				140					
Phe	Ser	Thr	Pro	Asn	Ile	Thr	Glu	Ser	Gly	Asn	Pro	Ser	Ala	Asp	Thr
	145					150			155			160			
Lys	Arg	Ile	Thr	Cys	Phe	Ala	Ser	Gly	Gly	Phe	Pro	Lys	Pro	Arg	Phe
	165					170				175					
Ser	Trp	Leu	Glu	Asn	Gly	Arg	Glu	Leu	Pro	Gly	Ile	Asn	Thr	Thr	Ile
	180					185				190					
Ser	Gln	Asp	Pro	Glu	Ser	Glu	Leu	Tyr	Thr	Ile	Ser	Ser	Gln	Leu	Asp
	195					200				205					
Phe	Asn	Thr	Thr	Arg	Asn	His	Thr	Ile	Lys	Cys	Leu	Ile	Lys	Tyr	Gly
	210					215				220					
Asp	Ala	His	Val	Ser	Glu	Asp	Phe	Thr	Trp	Glu	Lys	Pro	Pro	Glu	Asp
	225					230				235			240		
Pro	Pro	Asp	Ser	Lys	Asn	Thr	Leu	Val	Leu	Phe	Gly	Ala	Gly	Phe	Gly
	245					250				255					
Ala	Val	Ile	Thr	Val	Val	Val	Ile	Val	Val	Ile	Ile	Lys	Cys	Phe	Cys
	260					265				270					
Lys	His	Arg	Ser	Cys	Phe	Arg	Arg	Asn	Glu	Ala	Ser	Arg	Glu	Thr	Asn
	275					280				285					
Asn	Ser	Leu	Thr	Phe	Gly	Pro	Glu	Glu	Ala	Leu	Ala	Glu	Gln	Thr	Val
	290					295				300					
Phe	Leu														
	305														

&lt;210&gt; 14

<211> 309  
<212> PRT  
<213> Mus musculus

&lt;400&gt; 14

Met	Asp	Pro	Arg	Cys	Thr	Met	Gly	Leu	Ala	Ile	Leu	Ile	Phe	Val	Thr
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Val	Leu	Leu	Ile	Ser	Asp	Ala	Val	Ser	Val	Glu	Thr	Gln	Ala	Tyr	Phe
				20				25					30		
Asn	Gly	Thr	Ala	Tyr	Leu	Pro	Cys	Pro	Phe	Thr	Lys	Ala	Gln	Asn	Ile
	35					40				45					
Ser	Leu	Ser	Glu	Leu	Val	Val	Trp	Gln	Asp	Gln	Gln	Lys	Leu	Val	
	50					55				60					
Leu	Tyr	Glu	His	Tyr	Leu	Gly	Thr	Glu	Lys	Leu	Asp	Ser	Val	Asn	Ala
	65					70				75			80		
Lys	Tyr	Leu	Gly	Arg	Thr	Ser	Phe	Asp	Arg	Asn	Asn	Trp	Thr	Leu	Arg

85	90	95
Leu His Asn Val Gln Ile Lys Asp Met	Gly Ser Tyr Asp Cys Phe Il	
100	105	110
Gln Lys Pro Pro Thr Gly Ser Ile Ile Leu Gln Gln	Thr Leu Thr	
115	120	125
Glu Leu Ser Val Ile Ala Asn Phe Ser Glu Pro	Glu Ile Lys Leu Ala	
130	135	140
Gln Asn Val Thr Gly Asn Ser Gly Ile Asn Leu	Thr Cys Thr Ser Lys	
145	150	155
Gln Gly His Pro Lys Pro Lys Lys Met	Tyr Phe Leu Ile Thr Asn Ser	
165	170	175
Thr Asn Glu Tyr Gly Asp Asn Met Gln	Ile Ser Gln Asp Asn Val Thr	
180	185	190
Glu Leu Phe Ser Ile Ser Asn Ser	Leu Ser Leu Ser Phe Pro Asp Gly	
195	200	205
Val Trp His Met Thr Val Val Cys Val Leu Glu	Thr Glu Ser Met Lys	
210	215	220
Ile Ser Ser Lys Pro Leu Asn Phe Thr Gln Glu	Phe Pro Ser Pro Gln	
225	230	235
Thr Tyr Trp Lys Glu Ile Thr Ala Ser Val	Thr Val Ala Leu Leu	
245	250	255
Val Met Leu Leu Ile Ile Val Cys His Lys Lys Pro Asn	Gln Pro Ser	
260	265	270
Arg Pro Ser Asn Thr Ala Ser Lys Leu Glu Arg Asp	Ser Asn Ala Asp	
275	280	285
Arg Glu Thr Ile Asn Leu Lys Glu Leu Glu Pro	Gln Ile Ala Ser Ala	
290	295	300
Lys Pro Asn Ala Glu		
305		

<210> 15  
<211> 322  
<212> PRT  
<213> Mus musculus

<400> 15		
Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro		
1	5	10
Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly		
20	25	30
Leu Phe Leu Leu Leu Ser Ser	Leu Cys Ala Ala Ser Ala Glu Thr	
35	40	45
Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp		
50	55	60
Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln		
65	70	75
Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser		
85	90	95
Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser		
100	105	110
Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val		
115	120	125
Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr		
130	135	140
Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val		
145	150	155
Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn		
165	170	175
Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro		
180	185	190
Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp		
195	200	205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr  
 210 215 220  
 Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val  
 225 230 235 240  
 Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile  
 245 250 255  
 Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu  
 260 265 270  
 Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu  
 275 280 285  
 Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro  
 290 295 300  
 His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp  
 305 310 315 320  
 His Ala

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 <212> PRT  
 <213> Mus musculus

<400> 16  
 Gly Asn Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly  
 1 5 10 15  
 Val Tyr Cys Cys Ile Ile Ser Tyr Gly  
 20 25

<210> 17  
 <211> 28  
 <212> DNA  
 <213> Mus musculus

<400> 17  
 caggaattca ccatgaggat atttgctg 28

<210> 18  
 <211> 29  
 <212> DNA  
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<400> 18  
 catcagatct atgtgagtcc tgttctgtg 29